

TRAINING TITLE

ENHANCED OIL RECOVERY (EOR) AND SUSTAINABILITY WITH ZERO-EMISSION TECHNOLOGY

Training Duration

5 days

Training Venue and Dates

Ref. No. PE050	Enhanced Oil Recovery (EOR) and Sustainability with Zero-Emission Technology	5	17 – 21 Feb. 2025	\$5,500	Abu Dhabi, UAE
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In any of the 4-5-star hotels. The exact venue will be informed later.

Training Fees

- **\$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch**

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING WORKSHOP DESCRIPTION

Strengthen the knowledge of multiphase flow and primary and secondary recovery. Include EOR and secondary recovery processes and methods such as steam flood and water flood injection and hydraulic fracturing. Set the screening criteria to choose EOR and secondary recovery techniques and expected additional recovery while evaluating economic costs conditions and benefits.

TRAINING OBJECTIVES:

After completing the training, the employee will:

1. Develop recovery expectations from reservoirs under primary depletion or pressure maintenance utilizing water or immiscible gas injection.
2. Determine reasons and causes for less than theoretically possible recovery.
3. Choose appropriate methods for improving oil recovery from reservoirs under primary depletion or pressure maintenance utilizing water or immiscible gas injection.
4. Enhance oil recovery beyond waterflooding or immiscible gas injection projects.
5. Understand mechanisms responsible for recovery improvement in various EOR methods.
6. Important variables that control recovery improvement in various EOR methods
7. Select EOR methods using screening criteria.
8. Use designing procedures - theoretical, laboratory tests, and field pilots.
9. Plan and implement EOR processes employing the proper empirical, analytical, and simulation tools.

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10. Forecast rate-time and recovery-time behavior under various EOR methods and analyze reservoir performance.
11. Assess risks and ways to minimize their impact on project economics.
12. Monitor reservoir/well behavior.

WHO SHOULD ATTEND?

- Reservoir Engineers
- EOR Reservoir Engineers
- Petroleum Engineers
- Field/Production Engineers
- Facilities/Process Engineers
- EOR Projects Team Leader/Managers
- Development/Exploitation Engineers
- EOR Production Technologists
- Other persons who seek to have more knowledge of EOR projects

TRAINING METHODOLOGY

This course combines sound engineering, operation and maintenance principles, applicable standards, and best industry practices for reliable and cost-effective process plant systems. Delegates will be encouraged to introduce problems of their own for discussion and analysis. Copies of all lecture materials, case studies, and workbooks will be provided. Group discussions will be carried out on problems faced. This training program is lecture-based and customized to the needs of the audience, providing a meaningful experience for personnel who work in petroleum plants. Daily sessions include formal presentations, prepared in PowerPoint, interspersed with directed discussions and case studies. In addition to formal lectures and discussions, the delegates will learn by active participation through the use of problem-solving exercises, group discussions, analysis of real-life case studies, etc. Many relevant videos will be shown during the training.

All attendees receive a course manual as a reference.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

Course Program

Day-1 –

Pre-test

Introduction to EOR

1.1 Definitions of Improved oil recovery (IOR) and enhanced oil recovery (EOR)

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- 1.2 Field development stages from primary recovery, secondary, and EOR
- 1.3 Estimation of oil recovery from each development stage, the reason for EOR
- 1.4 Secondary recovery methods of pressure maintenance (water and immiscible gas injection)
- 1.5 EOR target of remaining oil after primary/secondary methods.

Day – 2 -

EOR methods

- 2.1- Theoretical calculations of recovery (areal and vertical displacement)
- 2.2- Important variables that control recovery improvement in various EOR methods
- 2.3- Mechanisms responsible for recovery improvement in various EOR methods
- 2.4- Conducting screening criteria to select prorated EOR methods.
- 2.5- EOR laboratory studies (EOR PVT and EOR core-flooding).

Day - 3 -

EOR Pilot Studies

- 3.1- Pilot types (what data required from the pilot?)
- 3.2- Pilot confinements issues (selecting the pilot area in the field)
- 3.3- Pilot simulation studies (prediction of pilot performance)
- 3.4- Implantation of the pilot project (data gathering during the drilling program)
- 3.5- Pilot monitoring (data type, frequency, timetable)

Day - 4 -

Full Field EOR Applications

- 4.1- Scaling up pilot project to larger project for specific field area or full field
- 4.2- Sector and full field simulation studies
- 4.3- Setup prediction case criteria and define the base case
- 4.4- Define prediction cases including EOR cases.
- 4.5- Comparisons of EOR prediction case(s) to base case

Day – 5-

Economic Evaluation and Risk Assessment

- 5.1 Make a rough estimation of economic evaluation (economic parameters)
- 5.2 Establish a risk assessment table for reservoir parameters.
- 5.3 Field operations and mitigation plans.
- 5.4 Closing Remarks

Post-test

TRAINING OUTCOME

- Different types of Oil Recovery Methods
- EOR concept and key terminology

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- EOR common types/methods
- Phases for EOR project implementation
- EOR screening criteria
- EOR common Laboratory Measurements
- EOR Modelling Studies
- Simulation Model for EOR
- EOR Pilot Design/Monitoring Plan/Pre-Pilot Tests
- Examples of EOR field case studies

NOTE:

Pre & Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day Review, and assessments will be carried out.

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